

INTEGRATED
NATURAL
RESOURCES
MANAGEMENT
PLAN
2002 - 2006

U.S. ARMY ALASKA
VOLUME 2 – FORT RICHARDSON

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INTEGRATED NATURAL RESOURCES
MANAGEMENT PLAN
2002-2006

U.S. ARMY ALASKA
VOLUME 2 – FORT RICHARDSON

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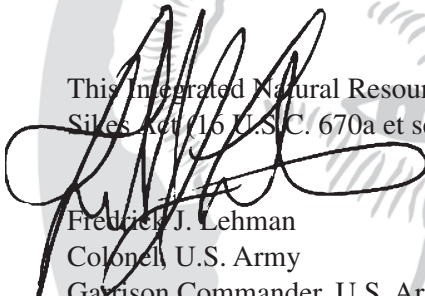
*This Integrated Natural Resources Management Plan
is dedicated to the memory of
Laurie Angell*

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APPROVAL

This Integrated Natural Resources Management Plan meets the requirement of the
Sikes Act (16 U.S.C. 670a et seq.) as amended.


Frederick J. Lehman
Colonel, U.S. Army
Garrison Commander, U.S. Army

Date

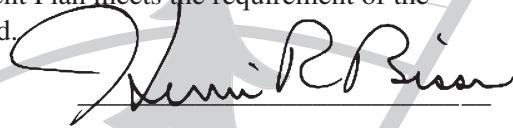
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U.S. DEPARTMENT OF THE INTERIOR
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APPROVAL

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DEC 19 2002

Henri Bisson
State Director, Alaska
Bureau of Land Management

Date

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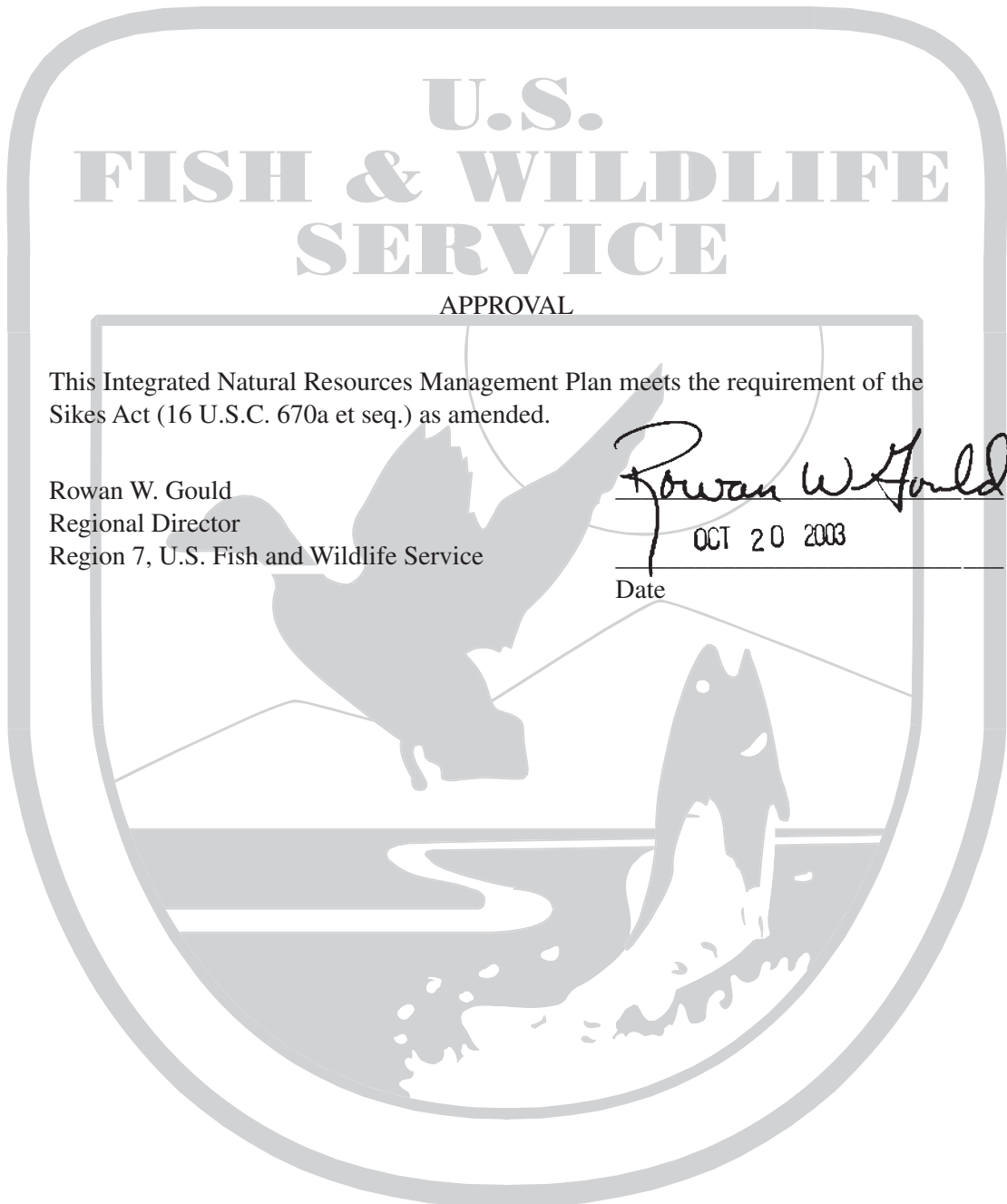
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Regional Director
Region 7, U.S. Fish and Wildlife Service

Rowan W. Gould
OCT 20 2003

Date



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APPROVAL

This Integrated Natural Resources Management Plan meets the requirement of the Sikes Act (16 U.S.C. 670a et seq.) as amended.

Frank Rue
Commissioner
Alaska Department of Fish and Game

Frank Rue

11.19.02

Date

Preface



“We do not own this land; we are caretakers of the land and the plant and animal species that inhabit it. The American people entrust the land to our care, and we shall fulfill their trust. We shall conserve and protect these resources for the future.”¹

At the turn of the 19th century, French scientist J.B. LaMark cautioned that man is destined to extinction by destroying his environment. Two hundred years later, little has been done to preserve our environment, while much has been done to deplete it. As we stand on the threshold of a new century, it is clear that the steps we take today to protect our natural resources will be our legacy to generations in the 21st century and beyond. From a military standpoint, the way we manage our lands will, in part, affect the nation’s future defense posture.

In this age of environmental awareness, management of our nation’s natural resources must be based on a sound approach and dedicated pro-

grams. Crucial to the success of this endeavor is a true, unfaltering commitment from commanders, soldiers, trainers, natural resources personnel, and engineers.

The Department of Defense (DOD) is steward of about 25 million acres of land in the United States, harboring many irreplaceable natural and cultural resources. As our nation continues to grow and develop, these military lands become important as last strongholds for much of our country’s dwindling natural resources.

U.S. Army Alaska (USARAK) is custodian for nearly two million acres of predominately undeveloped land on which to carry out its mission. With

¹ Robert M. Walker, Assistant Secretary of the Army Testimony before Congress, July 11, 1995



two large posts in Alaska's interior and a smaller one in the south-central region, USARAK enjoys a full representation of the unique natural resources and environmental conditions that Alaska has to offer. It is this that makes USARAK's "Northern Warrior" a special kind of soldier who lives and trains in one of the most rugged and beautiful places left on earth.

Nestled below the massive peaks of the Chugach Range, Fort Richardson, Headquarters U.S. Army Alaska, together with neighboring Chugach State Park, gives Anchorage all the charisma and charm of a city poised on the edge of wilderness. The military lands encompass countless lakes and ponds, coastline, vast forested areas, and tundra-covered mountain slopes. They harbor a variety of wildlife including moose, Dall sheep, wolves, brown and black bears, wolverines, lynx, coyote, otters, beavers, bald eagles, trumpeter swans, and a myriad of lesser known species. These natural treasures are contained within a 61,000-acre continuum of ecosystems, making a dramatic transition from the marine environment of Upper Cook Inlet to the spartan alpine peaks of the Chugach Mountains in a distance of less than eight miles. This unique responsibility and opportunity is found nowhere else on lands owned or used by the Department of Defense.

Those who live and train on Fort Richardson well understand and appreciate both the intrinsic and practical value of these lands and their natural resources. The fact that they still exist at all in a relatively natural state is a credit to the Army. Im-



mediately outside the post, land development occurs feverishly whenever and wherever it can, and repeated attempts are made to secure either ownership or long-term use of Fort Richardson's valuable training lands for non-training uses. Past losses of training lands and natural resources for uses not supporting the training mission have placed the post in a state of operational concern. Any future losses seriously threaten its military viability.

This concern dictates the current policy that any long-term use of Fort Richardson's lands and natural resources not clearly in the best interests of the military mission and/or the environment is generally unacceptable. Under Army stewardship, the land and natural resources have been improved and preserved over the years, and the Army intends to continue to preserve them. The condition of these lands is crucial to the military mission, the well-being of the community, and the overall health of the nation's environment.

This Integrated Natural Resources Management Plan is USARAK's authoritative guide for the care and wise use of lands entrusted to the U.S. Army, as endorsed by the Commanding General and other signatory agencies. The plan covers a five-year period, but the philosophy behind it will be used for a much longer period of time. USARAK is committed to using an ecosystem management approach to its natural resources program. This approach helps protect biological diversity and facilitates sound decisions regarding the wise use of renewable natural resources to support the needs of the military mission in the region.

Abundant and diverse natural resources, and a healthy environment for promoting premier training grounds . . . now and forever . . . is the commitment of U.S. Army Alaska.

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FINAL

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ACRONYMS

AAC	Alaska Administrative Code
ABO	Alaska Bird Observatory
ABR	ABR, Inc., Environmental Research and Services
ADC	Animal Damage Control
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
AEC	Army Environmental Center
AFB	Air Force Base
AFS	Alaska Fire Service
AFTAC	Air Force Technical Applications Center
ALCOM	Alaska Command
ALMAT	Army Land Management Advisory Team
AMT	Alaska Meteorological Team
ANILCA	Alaska National Interest Lands Conservation Act
AR	Army Regulation
ARPA	Archeological Resources Protection Act
ARTEP	Army Training and Evaluation Program
ASDZ	Automated Surface Danger Zone
ATTACC	Army Training and Testing Area Carrying Capacity
ATV	All Terrain Vehicle
AWSS	Area Weapons Scoring System
BASH	Bird Air Strike Hazard
BBS	Breeding Bird Survey
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BRAC	Base Realignment and Closure
CALFEX	Combined Arms Live-Fire Exercise
CEMML	Center for Environmental Management of Military Lands
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFI	Continuous Forest Inventory
CFR	Code of Federal Regulations
COE	Corps of Engineers
CRM	Cultural Resources Manager
CRREL	Cold Regions Research and Engineering Laboratory
CSU	Colorado State University

CWA	Clean Water Act
DA	Department of the Army
DAMO-TR	Directorate of Training
dbh	diameter breast height
DOD	Department of Defense
DOI	Department of Interior
DPCA	Directorate of Personnel and Community Activities
DPTSM	Directorate of Plans, Training, Security and Mobilization
DPW	Directorate of Public Works
DZ	Drop Zone
EA	Environmental Assessment
EA	Environmental Awareness
EBS	Environmental Baseline Survey
EIS	Environmental Impact Statement
ELS	Ecological Land Survey
EO	Executive Order
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
EPR	Environmental Program Requirements
ERD	Environmental Resource Division
FGDC	Federal Geographic Data Committee
FLPMA	Federal Land Policy and Management Act
FNSI	Finding of No Significant Impact
FY	Fiscal Year
GIS	Geographic Information Systems
GMU	Game Management Unit
gpm	gallons per minute
GPS	Global Positioning System
HQDA	Headquarters, Department of the Army
IBCT	Interim Brigade Combat Team
ICRMP	Integrated Cultural Resources Management Plan
ICUZ	Incompatible Use Zones
IFS	Integrated Facility System
INRMP	Integrated Natural Resources Management Plan
IPA	Intergovernmental Personnel Act
IPMP	Installation Pest Management Plan
IRP	Installation Restoration Plan
ISR	Installation Status Report
ITAM	Integrated Training Area Management
ITC	Installation Training Capacity

LCTA	Land Condition Trend Analysis
LEC	Law Enforcement Command
LEIS	Legislative Environmental Impact Statement
LRAM	Land Rehabilitation and Management
LTA	Local Training Area
MACOM	Major Command
MAPS	Measuring Avian Productivity and Survival
MFE	Major Flying Exercise
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MOUT	Military Operations in Urban Terrain
mph	miles per hour
MPRC	Multi-Purpose Range Complex
MRE	Meals Ready to Eat
MSR	Main Supply Route
NBC	Nuclear, Biological, and Chemical
NCO	Non-Commissioned Officer
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOV	Notice of Violation
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
O&M	Operation and Maintenance
OACSIM-ODEP	Office of the Assistant Chief of Staff for Installation Management- Office of the Directorate of Environmental Programs
OAS	Office of Aircraft Services
ODCSOPS	Office of the Deputy Chief of Staff, Operations and Plans
ORISE	Oak Ridge Institute of Science and Education
ORV	Off-Road (Recreational) Vehicle
PL	Public Law
PLO	Public Land Order
PMC	Plant Material Center
PMO	Provost Marshals Office
POL	Petroleum, Oil, and Lubricants
PSWCD	Palmer Soil and Water Conservation District
RAB	Restoration Advisory Board
REC	Record of Environmental Consideration
RETS	Remote Electronic Target Sensing
RFMSS	Range Facilities Management Support System
RMP	Resource Management Plan

ROD	Record of Decision
RTLTP	Range and Training Land Program
SAIA	Sikes Act Improvement Act
SDS	Spatial Data Standards
SHPO	State Historic Preservation Office
SMOTE	Spatial Management of Training Environment
SPOT	Satellite Probatoire d’Observation de la Terre
SRP	Site Rehabilitation Prioritization
SUSV	Small Unit Support Vehicle
TA	Training Area
TAPS	Trans-Alaska Pipeline System
TCC	Tanana Chiefs Conference, Inc.
TFTA	Tanana Flats Training Area
TOC	Tactical Operations Center
TRI	Training Requirements Integration
TSI	Timber Stand Improvement
TSSDS	Tri-Service Spatial Data Standards
UAF	University of Alaska Fairbanks
US	United States
USAF	United States Air Force
USARAK	United States Army Alaska
USARPAC	United States Army Pacific Command
USC	United States Code
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
UXO	Unexploded Ordnance
WES	Waterways Experiment Station

Executive Report



*“I realized that in Alaska I found my way back to the troops,
I’d reconnected with nature...and I was beginning to learn
to derive my satisfactions from within.”²*

Purpose

This Integrated Natural Resources Management Plan (INRMP) guides the implementation of the natural resources program on Fort Richardson, Alaska, from 2002 through 2006. This program ensures the perpetuation of quality training lands to accomplish Fort Richardson’s critical military mission by conserving natural resources and complying with environmental laws and regulations.

Scope

This plan applies to organizations both internal and external to Fort Richardson that are involved

with, or interested in, the management or use of Fort Richardson lands and natural resources. This includes active duty units, directorates, National Guard and Reserve components, federal and state agencies, private groups, and individuals. This INRMP is an integral part of the Fort Richardson Installation Master Plan and the Range & Training Land Program Development Plan.

Relationship to the Military Mission

U.S. Army Alaska (USARAK), headquartered at Fort Richardson, is responsible for the coordi-

² Gen. H. Norman Schwarzkopf from *It Doesn’t Take a Hero*



Fort Richardson's soldiers train in some of the world's harshest environments.

nation of all U.S. Army resources in Alaska, the defense of Alaska, and worldwide deployment of troops and equipment to support the interests of the nation. Fort Richardson soldiers are among the most specialized military professionals in the world, and they train to win battles in some of the world's harshest environments.

This INRMP is designed to support the military mission by protecting and enhancing the training lands upon which the mission is critically dependent. The INRMP also addresses recreational opportunities associated with natural resources within the Fort Richardson community, thereby supporting USARAK's commitment to both the Quality of Life and the Communities of Excellence programs.

The INRMP identifies impacts of the military mission upon natural resources along with methods and means to mitigate these impacts. It does not attempt to evaluate Fort Richardson's military mission, nor does it replace any need or requirement for environmental documentation of the military mission at Fort Richardson.

Environmental Compliance

This INRMP is required by the Sikes Act (16 U.S.C. 670a et seq.), Department of Defense Directive 4700.4 (*Natural Resources Management*

Program), and Army Regulation 200-3 (*Natural Resources – Land, Forest, and Wildlife Management*). In addition, this INRMP helps ensure that USARAK complies with other federal and state laws, most notably laws associated with environmental documentation, wetlands, endangered species, water quality, and wildlife management in general. It outlines how USARAK will implement provisions of AR 200-3 and local regulations, most notably Army Regulation 190-13 (*Enforcement of Hunting, Trapping and Fishing on Army Lands in Alaska*) (U.S. Army Alaska, 1994) and Army Regulation 350-2 (*Range Regulation*) (U.S. Army Alaska, 1995).

This INRMP has Endangered Species Act implications. Review and signatory approval of this INRMP by the U.S. Fish and Wildlife Service is considered informal consultation with regard to the Endangered Species Act.

The Sikes Act, as amended in November 1997, requires that an INRMP address:

- Fish and wildlife management, land management, forest management, and fish and wildlife oriented recreation.
- Fish and wildlife habitat enhancement/modifications.
- Wetland protection, enhancement, and restoration where necessary for support of fish, wildlife, or plants.
- Integration of, and consistency among, the various activities conducted under the plan.
- Establishment of specific natural resource management goals and objectives and time frames for proposed action.
- Public access to the military installation that is necessary or appropriate for sustainable use of natural resources by the public to the extent that such use is consistent with the military mission and the needs of fish and wildlife resources, subject to requirements necessary to ensure safety and military security.
- Enforcement of applicable natural resource laws (including regulations).

- No net loss in the capability of military installation lands to support the military mission of the installation.
- Regular review of this INRMP and its effects at least every five years.
- Provisions for spending hunting and fishing permit fees exclusively for the protection, conservation, and management of fish and wildlife, including habitat improvement, and related activities in accordance with the INRMP.
- Exemption from procurement of services under Office of Management and Budget Circular A-76 and any of its successor circulars.

Current Ecosystem Status

Fort Richardson has six broad ecosystem types: alpine, sub-alpine, boreal forests, freshwater lakes and ponds, rivers and streams, and estuarine. The post supports a wide variety of plants and animals, and its relatively wild status is perhaps best characterized by the presence of a thriving wolf pack, the occasional brown bear, and a healthy population of black bears. There are over 600 species of vascular plants currently recorded from the post and 149 species of birds, none of these currently classified as threatened or endangered.

The quality of surface water on Fort Richardson is assumed to be very good. There are no indications of changes in the quality of surface water since Army occupation of the land. There is localized contamination of groundwater from past Army activities, mostly within the cantonment area. These areas of groundwater contamination, however, are not considered drinking water sources (drinking water on post comes from upper Ship Creek) and hence are not thought to affect human health.

The most negative effect of Army activities over the last 40 years has been the contamination of soils in the Eagle River Flats Impact Area with white phosphorus and the subsequent impacts on waterfowl. Mortality of waterfowl occurs after the birds ingest white phosphorus pellets mistaken for food. This area has been declared a “Superfund” site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and is now undergoing cleanup.

There are no data regarding trends in soil erosion rates on Fort Richardson, but erosion has probably declined in recent years because there is less intensive troop activity on the ranges.

Although changes in vegetation have not been documented in the past, it is obvious that much of the land was disturbed prior to Army occupation. Fire scars reveal that forest fires, prior to military use of these lands, burned relatively large areas and caused widespread disturbance to existing ecosystems. This is best evidenced by the predominance of even-aged timber stands. The most substantial change in habitats that can be attributed to military use is the clearing of forested areas for specific activities (cantonment area, drop zones, arms ranges, recreational sites, etc.). These areas, in total, represent approximately 6280 acres or 10 percent of the acreage on Fort Richardson. Some of these areas, however, were cleared before the military arrived, in the process of establishing homesteads in the Anchorage area (Hollinger 2001), and others are clearings in land easements with other agencies (Anchorage Municipal Landfill and Barlett High School). Since 1975 artificial forest clearings have been made to create moose habitat (see below). These moose habitat clearings, in total, represent roughly 1550 acres or 2.5 percent of the acreage on Fort Richardson. These clearings represent only alterations of forested habitats, and large, intact areas of such forests exist elsewhere on Fort Richardson. None of the existing evidence suggests that the Army’s activities have removed or substantially altered important habitats and therefore it is unlikely that biological diversity has been reduced



Fort Richardson has diverse ecosystems.

on Fort Richardson, with the possible exception of the impacts on Eagle River Flats. It is unclear how biodiversity today compares with that of pre-settlement times.

At the present time there are roughly 40,000 acres of native forests on Fort Richardson. Although some projects outlined in this INRMP will require removal of forest, this will be on a small scale. The forested areas of white spruce killed by the spruce bark beetle (*Dendroctonus rufipennis*) will regenerate. There are no immediate plans to develop commercial sales of timber or forest products because the market for these products is poor. The forest cover on Fort Richardson provides a superb natural setting and realistic stage for the Army's training mission.

The post clearly can support its current training mission. That capability is stable at present but training demands may increase in the future with the impending transformation of the Army (see Chapter 1, Section 1.4.1.3). The capability of supporting the current and future training missions on Fort Richardson is highly dependent on the Command's ability to retain all of the post's remaining lands for their intended military training purposes.

The ability of the ecosystems on Fort Richardson to support hunting and fishing improved with the Army's occupation of the land. In the 1950s and 1960s, troop training activities and mechanized vehicle testing altered sizable tracts of mature forest. Primary successional woody species provided excellent winter moose browse, allowing the Fort Richardson moose herd to expand. As troop movements became less ground-based with the use of helicopters, and fire suppression efforts increased, land use patterns and natural plant succession changed, resulting in the reduction of important winter habitat for moose. During this same period, the city of Anchorage began developing extensive areas of vacant land, further reducing the amount of available habitat and displacing additional moose to Fort Richardson. In 1975, the Army initiated a browse rehabilitation program, which utilized mechanical methods to treat overmature moose habitat and promote resprouting and regeneration of the woody browse species. These treatments, in part,

replace the role of natural fire in habitat mechanics.

Agriculture is not an option on Fort Richardson, as two-thirds of the land is forested coastal plain while the remaining third is steep mountain slopes and alpine tundra unsuitable for agricultural use.

Partnerships

This INRMP cannot be implemented by USARAK alone. In accordance with land withdrawal legislation and an ecosystem management approach, USARAK is forging partnerships with various agencies for management of its natural resources. Major partners in the implementation of this plan include the U.S. Fish and Wildlife Service, Alaska Department of Fish and Game, and Bureau of Land Management. Other partners in this effort include universities; other federal, state, and local agencies; private contractors; and private citizens.

Plan Components

This INRMP outlines goals and policies in five general areas: stewardship, military readiness, quality of life, compliance, and program integration. It explains Fort Richardson's military mission in general terms, including the mission's impacts on natural resources. It describes Fort Richardson's climate, land base, facilities, and natural resources, including a brief legal and administrative history of natural resources management on Fort Richardson. The plan also lists agencies, organizations, and individuals involved in implementation of this INRMP.

This INRMP represents a first attempt at moving from a largely single-species management philosophy to a more integrated ecosystem approach, which is a departure from Fort Richardson's natural resource policies of the past. This new approach is consistent with recent changes in laws and Department of Army policies. Ecosystem management will continue to allow the use of natural resources on Fort Richardson for both military and recreational purposes. Ecosystem management has a primary goal of protecting the elements and functions of natural ecosystems. Since these ecosystems

often extend beyond post boundaries, management plans for Fort Richardson's natural resources will place an increased emphasis on partnerships with its neighbors.

This plan is organized to promote integrated management of lands and natural resources. Chapter 1 describes the purpose and need for action, Chapter 2 describes the affected environment, and Chapter 3 describes the ecosystem management program. Chapters 4 and 5 describe all the proposed actions for overall natural resources management. Chapter 6 describes the management of civilian activities on post, and Chapter 7 describes the management support services used at Fort Richardson. Chapter 8 describes the implementation of the plan, and Chapter 9 discusses the effects of the proposed actions.

Planned Major New Initiatives

This INRMP includes a description of ongoing natural resources programs and projects. Most of these will either be continued or completed. There are important new initiatives within this INRMP. These include the following:

- Implement an ecosystem management approach to decision-making.
- Enhance inventory and monitoring programs with regard to flora and fauna.
- Continue to improve and more effectively use the geographic information system to enable better decisions regarding use and management of Fort Richardson natural resources.
- Provide special protection for unique and sensitive natural resources areas in terms of special habitats, high value recreation, and biological richness.
- Implement a forest management program to support the military mission and meet natural resources goals.
- Enhance and maintain the quality and quantity of wildlife habitat.
- Rehabilitate damaged training lands and erosion.

- Use habitat carrying capacity to determine wildlife harvest levels.
- Implement conservation enforcement.
- Evaluate options to install a Fort Richardson hunting and fishing permit fee program.
- Improve hunting harvest data collection using a new call-in system.

Unresolved issues within this INRMP include:

- Spruce bark beetle (*Dendroctonus rufipennis*) – control is difficult to effectively implement.
- Bluejoint grass (*Calamagrostis canadensis*) – few effective ways are available to control its spread.
- Continual encroachment pressures – can diminish military training opportunities and the integrity of ecosystems at Fort Richardson.
- Hunting and fishing permit fees – instituted in accordance with Department of the Army directives could contribute as much as \$20,000 annually for fish and wildlife management.

Ongoing Planning Activities

USARAK recognizes that this INRMP is not all encompassing, and will, in coordination with other agencies, develop specific management action plans to be incorporated into this INRMP as they are completed. Descriptions of these plans (listed below), their compliance authorities, and budget priorities can be found in Appendix D.

- Ecosystem Management Action Plan
- Habitat Management Action Plan
- Wetland Management Action Plan
- Forest Management Action Plan
- Special Interest Areas Conservation Action Plan
- Outdoor Recreation Management Action Plan
- ITAM Action Plan
- Landscaping Action Plan
- Fire Management Action Plan

- Soil Resources Management Action Plan
- Aerial Monitoring Action Plan for Ecosystem Management

While work on specific action plans remains to be completed, this INRMP uses existing information as a basis to continue and improve natural resources management while planning continues. An INRMP is required to be prepared and implemented with updates occurring every five years, regardless of the stage of program development. The INRMP is not a final product, rather it is a dynamic mechanism to guide program operation for the next five years.

Benefits and Costs

Military Mission Benefits: Implementation of this plan will insure the continued availability of superior training land. It will perpetuate mission realism through the use of naturally diverse and challenging settings. Additionally, the plan will improve the ability for long-range planning at Fort Richardson.

Environmental Benefits: The plan provides the basis for the conservation and protection of natural resources. Implementation of the plan will reduce vegetation loss and soil erosion from military activities and decrease the potential for environmental pollution. It will maintain or improve water quality in riparian and aquatic ecosystems. Plan implementation will increase the overall knowledge of the operation of Fort Richardson ecosystems through field surveys and research.

Other Benefits: Troop environmental awareness will be heightened while training at Fort Richardson. Both community relations and Fort Richardson's environmental image, internal and external to the Department of Defense, will be enhanced.



Fort Richardson provides a rich and challenging training arena.

Quality of life for the Fort Richardson community and its neighbors will be improved. Plan implementation will decrease long-term environmental reparation costs and reduce personal and USARAK liability from environmental noncompliance.

Costs: It will cost about \$2,642,650 annually during 2002-2006 to implement this INRMP. Funding will come primarily from either conservation money or training funds designated for implementation of the ITAM program. Other dollars will be from special natural resources funds, forestry, and perhaps fish and wildlife permit fees. Plan implementation will require staffing increases.

Summary

The actions within this INRMP will comply with environmental laws, conserve and protect Fort Richardson's natural resources, improve Fort Richardson's relationship with the public, and enhance the military mission. Although this plan will not resolve all existing and/or future environmental issues, it provides the guiding philosophy and outlines specific means to minimize and work toward resolution of such issues.